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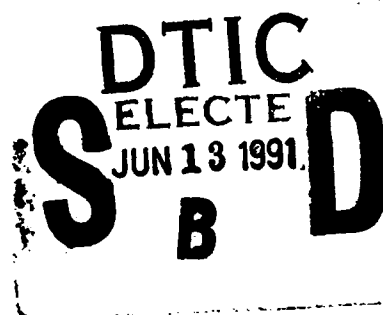


NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS



IMPLEMENTING STRATEGY IN A BUDGET:
A MODEL OF THE COAST GUARD RESERVE

by

CARL DOUGLAS BROMUND

JUNE 1990

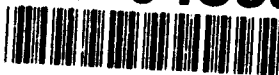
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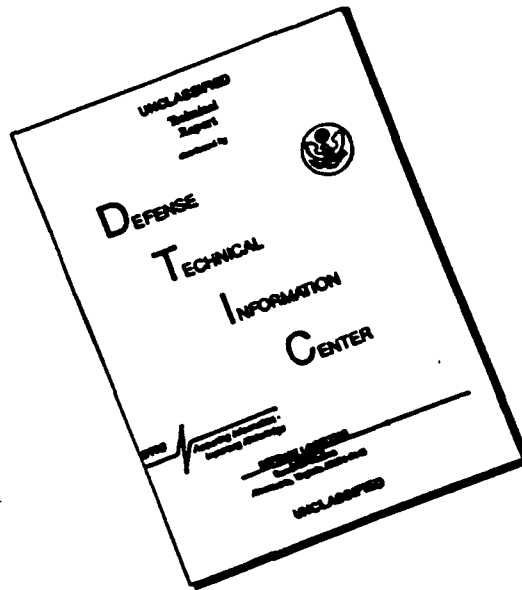
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**Implementing Strategy in a Budget:
A Model of the Coast Guard Reserve**

by

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Lieutenant Commander, United States Coast Guard Reserve
B.S., State University of New York, 1981

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

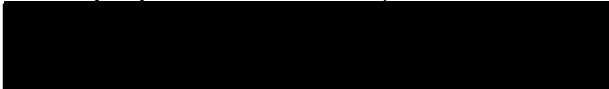
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ABSTRACT

This thesis discusses the management strategy of the Coast Guard Reserve; it examines the formulation and implementation of strategy.

A model to develop and implement strategy is proposed, which defines the role of the budget in this strategic management process. The recent strategy of the Coast Guard Reserve is analyzed using this model. The analysis seems to indicate that the Coast Guard Reserve had no explicit strategy in the 1980's; however, the Reserve did execute an implicit strategy as inferred from its actions. This implied strategy enjoyed varying degrees of success depending on the criterion of evaluation.

Where the criterion shows limited success, I recommend solutions to the various problems. A principle solution involves the Coast Guard Reserve expanding and formalizing the strategic process, including the use of the budget as a means to that end.



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I. INTRODUCTION

A. BACKGROUND

This study responds to a need for strategic planning by the Coast Guard Reserve. The intended future direction for the organization, and the corresponding commitment of resources, will require a firm foundation and clear vision to deliver a successful outcome. The first need is for a theoretical framework to distinguish and relate the critical components in the strategy management process. Empowered with this knowledge, decision makers can then more effectively devise and implement an appropriate strategy.

Several factors combine to make these choices more critical for the Coast Guard Reserve. First, recent rapid growth in national expenditures on drug interdiction and defense impacted the active duty Coast Guard's emphasis, and consequently the Coast Guard Reserve. Second, competition for funding in the Federal Budget arena may change because of Gramm-Rudman deficit restrictions and the growth of appropriations in entitlement programs. Third, military programs may come under further pressure towards reduction given the dramatic changes in the Soviet Union and Eastern Europe. Finally, demographic trends may reduce the pool of entry level youths for the Armed Forces.

This environment of constrained resources will dictate obtaining maximum value from resource commitments. Successful competition for these resources may require a clear articulation of an organization's costs and benefits. Investments may last longer and become more irreversible. The impact of decisions could increase, as the number of choices declines. Since strategy focuses on decisions about the future, the subject may prove especially useful in these times.

B. OBJECTIVE

The objective of this study is to develop a prototype of the strategic management process for use by the Coast Guard Reserve. The study focuses on management's intention to achieve objectives, and use of available resources to that end.

C. RESEARCH QUESTION

The primary research question asks: how is the strategy of the Coast Guard Reserve implemented in its budget ?
Subsidiary questions examine:

- What is the definition of strategy ?
- What was the past strategy of the Coast Guard Reserve ?
- How effective was that strategy ?
- How can the strategy be improved ?

D. SCOPE, LIMITATIONS AND ASSUMPTIONS

This thesis examines the practice of strategy by the Coast Guard Reserve. It examines decisions on the future of the organization, especially its use of resources to accomplish goals. To examine strategy, the goals will be discerned, and consumption of resources will be related to the accomplishment of the goals. The budget provides a useful framework for this analysis because it relates resources and goals by consumption and accomplishment.

The scope includes strategy formulation and execution. This thesis assumes a basic knowledge of management activities and the Coast Guard Reserve on the part of the reader.

The thesis proceeds sequentially through four main topics:

- Developing a model to define the concept of strategy
- Applying the model to the Coast Guard Reserve to infer its strategy
- Evaluating the success of that strategy against different criteria
- Using the budget to develop solutions to the various problems identified.

E. LITERATURE REVIEW AND METHODOLOGY

This thesis proposes a model for developing and executing strategy. The methodology includes a literature review to develop a model of strategy. Then, that model is applied to the Reserve program over the past decade to infer

the organization's strategy. Next, analysis discerns factors for success or failure, identifying key issues and problems. Following this, various solutions are recommended for these problems. The thesis concludes by recommending a formalized strategic planning process to solve current problems and avoid recurrences in the future.

F. ORGANIZATION OF STUDY

The thesis organization parallels the methodology. Chapter II presents theoretical elements of strategy and joins them in a model. Chapter III applies the model to infer the strategy of the Reserve program in the past decade. Chapter IV evaluates the effectiveness of the strategy and identifies some shortcomings. Chapter V develops solutions to the strategy's problems. An epilogue draws conclusions and makes recommendations.

II. STRATEGY: A MODEL

A. CHAPTER INTRODUCTION

This chapter seeks to provide an overview of strategy to be used as a foundation for later evaluation of the Coast Guard Reserve. The budget is a component of strategy, and will subsequently serve as the focus for analyzing the Reserve.

Discussion of the strategy of the Coast Guard Reserve depends first on a definition of the term "strategy." Chapter II addresses several preliminary questions including defining strategy and the role of the budget in strategy. Answers to these questions provide a foundation to explore the strategy of the Coast Guard Reserve.

Within the chapter, each section explores different aspects of strategy. Section B delineates the conditions which create the need for strategy. Section C offers several definitions of strategy, places these definitions in the business context, and introduces the role of the budget.

The following section expands these definitions, to view strategy as a system with formulation and implementation stages. The next section addresses the role of the strategist in directing the system. Then comparison of military and business strategies further illustrates the

decisions made by the strategist. Finally, a format to evaluate strategies is provided, along with a discussion of ultimate control systems for the different strategies.

B. BASIS FOR STRATEGY

Nature contains the basis for strategy. Scarce resources and the competition for survival are fundamental laws of nature. Yet only man with the ability to conceptualize, symbolize, and reason can practice strategy. Through thinking and planning, organizations hope to prevail by exploiting advantages in obtaining and using resources. Strategy is man's response to the following conditions

- Finite resources
- Uncertainty about an adversary's capability and intention
- Irreversible commitment of resources
- Necessity of coordinating action over time and distance
- Uncertainty about control of the initiative
- The critical nature of the adversaries' mutual perceptions of each other (Albert and others, 1983, p. 1-3)

The history of mankind reports the survival and growth of those organizations that excelled at strategy in response to these conditions. Continued failure in this activity leads only to extinction.

Hence, successful survival is one reason to study strategy. Both business and the military have the need to survive in their different environments; their goal is to prevail even in the face of adversaries. Survival serves as

a catalyst to other organizational goals. Without existence, the organization cannot accomplish its remaining goals.

Wherever the above conditions exist, one individual or organization can dominate an opponent through effective use of strategy. Decision making and uncertainty characterize this climate. Therefore, strategy seeks to provide a method for making those decisions which critically affect the outcome of the competition. The definitions offered in the next section place decisions at the core of strategy.

C. CORPORATE STRATEGY

1. Definitions

The first definition comes from Steiner, speaking of the essence of corporate strategy as:

the systematic identification of opportunities and threats that lie in the future, which in combination with other relevant data provide a basis for a company's making better current decisions to exploit the opportunities and to avoid the threats. (Steiner, 1979, p. 14)

Andrews offers a competing definition of strategy as:

the pattern of decisions in a company that determines and reveals its objectives, purposes or goals, produces the principal policies and plans for achieving those goals, and defines the range of business the company is to pursue, the kind of economic and human organization it is or intends to be, and the nature of the economic and non-economic contribution it intends to make to its shareholders, employees, customers and communities. (Andrews, 1980, p. 28)

Evered distills these definitions even further, saying:

strategy is dominated by the determination of...purpose..., and by consideration of the future character of the firm in relation to opportunities, threats, and constraints. (Evered, 1983, p. 61)

Note the absence of any unique features which would exclude non-profit or military organizations from these definitions. Business organizations operate in the commercial arena, where survival is motivated and sustained by profit. Naturally then, catalysts and threats to making profit will form the core of the business environment and corporate strategy. But the definitions can extend to any competitive environment as previously described. Strategy deals with critical decisions, organizational purpose, and future threats and opportunities.

2. Model

These definitions help conceptualize the idea of strategy, but they do not provide a methodology to practice strategy. Defining strategy as a process, provides a means to apply the previous concepts. In this manner, Steiner defines strategy as:

a process that begins with the setting of organizational aims, defines...policies to achieve them, and develops detailed plans to make sure that (they) are implemented...to achieve the ends sought. (Steiner, 1979, p. 14)

With strategy thus defined, a model of the strategic process can be derived to further illustrate the mechanics of applying strategy. Andrews separates strategy into "formulation and implementation" (Andrews, 1981, p. 41) stages. The formulation stage focuses on "deciding what to do;" while implementation points to "achieving results." Andrews' model of this process is shown below:

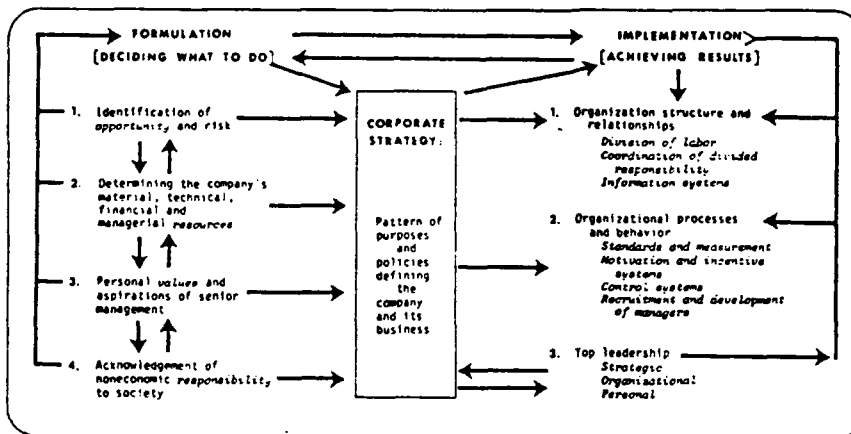


Figure 1 (Andrews, 1980, p. 41)

a. Interrelation of Stages

Andrews' general description of a complex system shows each stage as a separate component to aid understanding; however, no such clear distinctions occur. Steiner describes the overlap saying "planning cannot be disentangled from such management functions as organizing, directing, motivating and controlling." (Steiner, 1979, p. 4)

He refers to a report from a Conference Board Survey describing the manager in multiple roles:

...his role as planner is meshed with his role as organizer, director, and so on, in a seamless web of management; for instance, the thought he devotes to what might be termed planning questions, and decisions he makes about them, have implications for his exercise of control; and vice versa. It is the whole of his job that must be looked at, the interaction of the elements of the management process rather than the individual elements. (Steiner, 1979, p. 4)

The overlap attributed to the manager's roles also applies to the strategist. Decisions in one area impact decisions in other areas. But the initial cycle of strategy proceeds logically from the formulation to the implementation stage. As an iterative process, one stage supports the next.

b. Formulation Stage

The formulation stage produces alternatives, necessary for the following reasons:

Alternative strategies can improve the adaptability of the organization in two ways. First, by explicitly examining alternatives, it is likely that the organization will find some that are superior to their current strategy. Second, the environment might change; if alternative (contingency) plans have been prepared, the organization is in a better position to respond successfully. Alternatively, they can select a strategy that performs well even if the environment changes. (Albert and others, 1983, p. 2-9)

The formulation stage requires information on the organization, the environment, and the competition. The decision maker determines the relevance of these factors and

considers the "futurity of present decisions" (Drucker, 1974, p. 125). Steiner describes this as a look "at the chain of cause and effect consequences over time of an actual or intended decision...." (Steiner, 1979, p. 13) Since the number of alternatives and valuation of information is highly subjective, the formulation stage yields an infinite number of choices.

c. Implementation Stage

The implementation stage feeds on the alternatives produced in the formulation phase. Implementation requires selection of the optimum alternative based on a plan's ability to be implemented and achieve the organizational goals. Once selected, the strategy will dictate a structure and mission for the organization's resources. Besides selection, the implementation phase focuses on control activities, where control encompasses

the idea of directing a variable, or set of variables to realize a goal....any control system has three components linked by communications, these include a sensor.... selector.... and effector (Anthony, Dearden, and Beaford, 1989, p. 7).

Their function is similar to a thermostat.

(1) the thermostat has a thermometer (sensor) that measures the current temperature in the room; (2) the thermostat compares this measurement with a preset standard of the desired temperature (selector); and (3) if the current temperature is below the preset standard, the thermostat signals the furnace to turn on and send heat to the room, and when the temperature reaches the preset standard, the thermostat signals the furnace to

shut off (effector). (Anthony, Dearden, and Beaford, 1989, p. 8)

The strategy identifies key elements - factors critical to its success. Control activities monitor these factors and trigger responses to achieve the organizational goals. The strategist's role in formulating alternatives includes development of control activities. Alternatives vary in the degree that they fit the situation, meet the organization's goals, and are capable of controlled implementation.

The need for external controls decreases proportionately with the increase in members' devotion to the organization's goals. Andrews emphasizes this place of values in control systems, saying:

A system of controls must be supplemented by a selective system of executive recruitment and training. No system of control, no program of rewards and penalties, no procedures of measuring and evaluating performance can take the place of the individual who has a clear idea of right and wrong, a consistent policy for himself... (Andrews, 1980, p. 216)

Steiner again emphasizes the importance of implementation saying:

A final step in implementation concerns the control of individual behavior to insure the achievement of the...plans....It is only when activities of individuals are directed toward the achievement of enterprise aims, guided partly through these techniques, that strategies are really implemented. This involves the entire process of management. (Steiner, 1979, p. 265)

d. Adaptation and Flexibility

The initial strategy system concludes in success or failure. In an ongoing system, failure prompts adaptive change. The decision maker starts a new formulation phase, his judgment evolving with the experience gained in losing efforts. Steiner cautions against any end for this process, saying:

it should ... be conceived as a continuous process, especially with respect to strategy formulation, because changes in the business environment are continuous. (Steiner, 1979, p. 14)

This introduces the need for flexibility in the strategy. Ability to accommodate change is a consideration when evaluating alternative strategies. In a more dynamic environment, flexibility is a primary concern in selecting a strategy.

The discussion to this point, provides a basis, definition, and model for practicing strategy. However, some of the decisions are more critical than others to the outcome of the competition. These critical questions directly relate to the profitability of the business firm. The next section identifies the forces that will determine the profitability and survivability of a business firm.

e. Critical Issues

According to Porter, the businessman must operate within an industry defined by five competitive forces: "entry, threat of substitution, bargaining power of buyers, bargaining power of suppliers, and rivalry among current competitors (Porter, 1985, p. 6)." Porter's model explaining these forces is shown in Figure 2. This model of competitive forces will be applied to the Coast Guard Reserve in Chapter III.

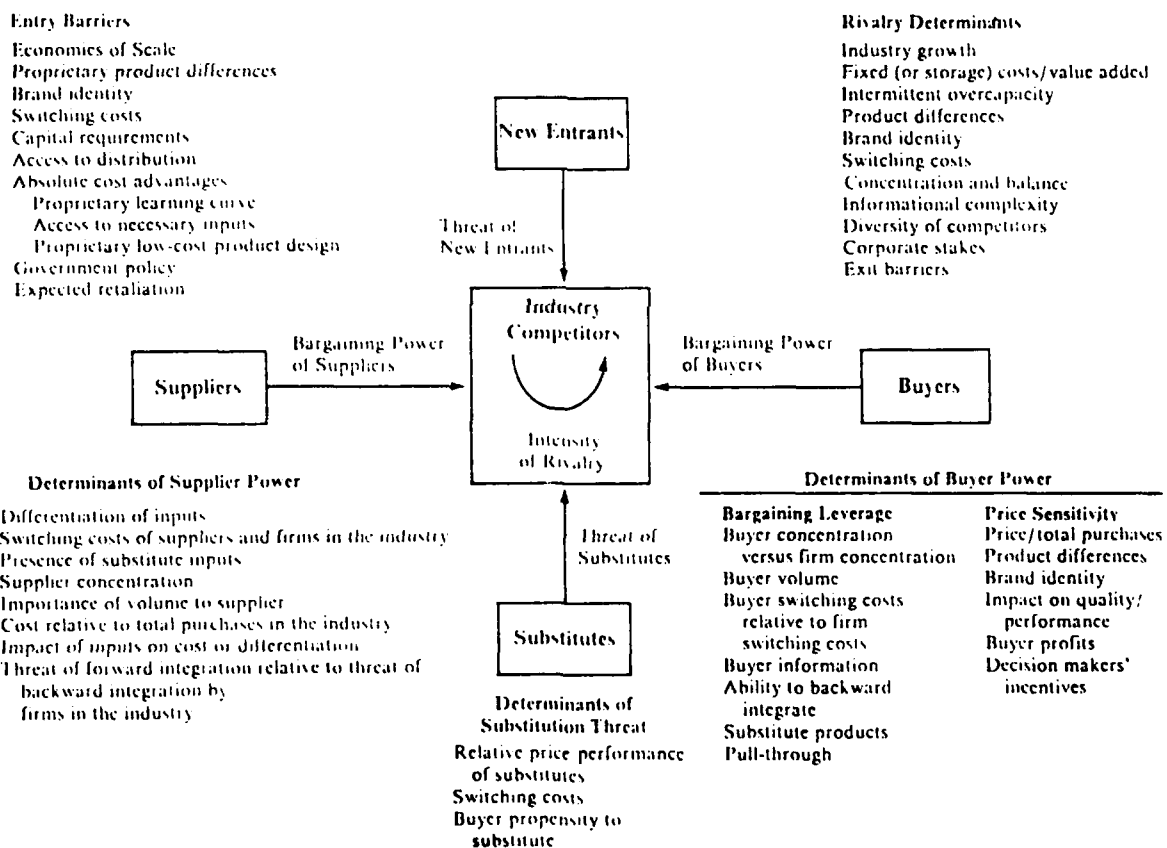


Figure 2 (Porter, 1980, p. 6)

In the strategy system, the information to initiate the formulation phase focuses on identifying these industrial attributes as they pertain to the company and its competitors. The company then calculates the futurity of this information and develops alternatives, as previously described on page 10. Porter fits business strategy into one of three generic categories: "overall cost leadership, differentiation, or focus (Porter, 1980, p. 35)." His model of the risk in these strategies is shown in Figure 3. Control mechanisms target the significant risks of the particular strategy.

RISKS OF COST LEADERSHIP	RISKS OF DIFFERENTIATION	RISKS OF FOCUS
Cost leadership is not sustained <ul style="list-style-type: none"> • competitors imitate • technology changes • other bases for cost leadership erode 	Differentiation is not sustained <ul style="list-style-type: none"> • competitors imitate • bases for differentiation become less important to buyers 	The focus strategy is imitated <p>The target segment becomes structurally unattractive</p> <ul style="list-style-type: none"> • structure erodes • demand disappears
Proximity in differentiation is lost	Cost proximity is lost	Broadly-targeted competitors overwhelm the segment <ul style="list-style-type: none"> • the segment's differences from other segments narrow • the advantages of a broad line increase
Cost focusers achieve even lower cost in segments	Differentiation focusers achieve even greater differentiation in segments	New focusers sub-segment the industry

Figure 3 (Porter, 1980, p. 21)

Porter's model upgrades the simple economic model of supply and demand, which states that a market will establish an equilibrium price at the intersection of the supply and demand curve. This equilibrium price will continue unless some force shifts the supply or demand curve. In general product markets, the demand curve shifts due to a change in consumers' income, the price of substitute items, or the price of complementary items. The supply curve shifts due to a change in technology or price changes in the factors of production. These curve shifting factors correspond directly to the factors Porter includes in his model.

In this context, business strategy becomes a method to obtain a comparative advantage or monopsony in a market for the factors of production or monopoly in the finished goods market. It requires a thorough knowledge of the company's internal strengths and weaknesses and the external competitive environment. In a limited view, the strategy process in business focuses on three processes which seek to obtain, develop, and exploit a comparative advantage:

- obtaining manpower, capital and technology (resources),
- combining them in an organization, using budgets and other operational plans (transforming), and
- marketing and distributing finished goods and services to consumers (output).

Porter's model shows that a main goal of the strategy process is to reduce the potential for external forces to shift the demand and supply curves. Competition could not displace a firm with a comparative advantage in providing a particular good or service. Business firms gain and hold competitive advantage by becoming the most efficient producer of a good or service, and focusing that product to the needs a particular market. Ansoff's model characterizes this market focus in his model of the types of strategic thrust shown in Figure 4. These thrusts show potential directions for an organization; they will be applied to the Coast Guard Reserve in Chapter IV.

ENTREPRENEURIAL		CONTINUITY			DISCONTINUITY	
		STABLE	REACTIVE	ANTICIPATING	EXPLORING	CREATIVE
MARKETING	STABLE	FIXED PRODUCTS - MAKING PRODUCT AVAILABLE TO MARKETS	EXPANSION OF FAMILIAR MARKETS INCREMENTAL PRODUCT ADAPTATION	EXPANSION TO RELATED MARKETS RELATED PRODUCT INNOVATION BASED ON KNOWN TECHNOLOGY	EXPANSION TO FOREIGN MARKETS NOVEL PRODUCT CONCEPTS	OPENING NOVEL MARKETS PIONEERING PRODUCTS
	REACTIVE	DEFENSIVE MAINTENANCE OF MARKET SHARE			ADOPTION OF NEW TECHNOLOGIES	CREATION OF NOVEL TECHNOLOGIES
	ANTICIPATING	AGGRESSIVE SEARCH OF MARKET SHARE				
MARKETING	EXPLORING	ADOPTION OF NEW MARKETING CONCEPTS				
	CREATIVE	PIONEERING MARKETING CONCEPTS				

Figure 4, (Ansoff, 1979, p. 65)

The niche question focuses strategy on positioning an organization in its environment to achieve dominance. A dominant position results from comparative advantage. So, while the environment changes between military, commercial and public sector activities - the purpose of strategy, to achieve dominance, remains the same. This dominance leads to survival and accomplishment of additional organizational goals.

The fundamental processes of obtaining and transforming resources into output are also the same in military and commercial activities. Besides viewing alternatives that position the organization in a desired niche, the strategist must consider the flexibility in this new position. As the environment changes, and new strategy evolves to meet these changes, the organization may need to seek a new niche.

Following strategy selection, control activities direct implementation. These control activities will vary depending on the strategy. Steiner notes that:

No company ever made a nickel of profit by making plans; profit flows from the implementation of plans. The aim of strategic planning...is to formulate superior strategies and to implement them effectively. (Steiner, 1979, p. 215)

The budget is a key mechanism for ensuring that profits occur with the implementation of a strategy. But profits result from sales to markets external to the firm.

The budget can only hope to target costs within the firm. By controlling costs - developing the product at a certain efficiency, the product can be competitively priced in the external market. This pricing advantage leads to sales and profits. The next section further describes the role of the budget.

D. BUDGETS

As an example, in the cost leadership strategy, a budget forms the basis for a control system. It provides an operating plan to combine assets and deliver a product. The company uses the budget to target low costs in the production budget, accompanied by sufficient volume in the sales budget. If these targets are achieved, the strategy will succeed. This concept meets the definition of budgets offered by Steiner:

Budgets are integrating methods to translate strategic plans into current actions. They are guides to action. They set standards for coordinated action and they provide a basis for controlling performance to see that it is in conformance with plans. (Steiner, 1979, p. 215)

This definition parallels the use of budgets in government organizations. Wildavsky cites multiple definitions for budget including:

links between financial resources and human behavior in order to accomplish policy objectives....concerned with translating financial resources into human purposes....a series of goals with price tags attached....a mechanism for making choices among alternative expenditures. When the choices are related to one another so as to achieve

desired goals, a budget may be called coordinated. Should it include a detailed specification of how objectives are to be achieved, a budget may also serve as a plan of work for those who assume the task of implementation. If emphasis is placed on achieving the most policy returns for a given sum of money, or on obtaining the desired objectives at the lowest cost, a budget may become an instrument for efficiency. (Wildavsky, 1988, p. 2)

As the company implements its strategy, it operates the control activities and monitors activity of its competitors. Should the environment change, or the control activities fail, the strategist should implement another previously designated alternative, or develop a new strategy.

Businesses need some predetermined measure to evaluate the success of the strategy, in essence, a control mechanism to trigger a new formulation phase. Successful business strategy depends on comparative advantage in three main processes previously enumerated:

- acquiring needed resources,
- transforming them into goods or services, and
- successfully delivering them to the consumer

Ideally, the control systems monitor these critical factors and predict the demise of the strategy with adequate notice to allow preventive or alternative action. Dissecting the budget into smaller time frames provides a control system which can signal smaller problems in daily or weekly cycles.

There must be someone at the core of the strategy process to identify and make the critical decisions. The

next section describes the role of that decision maker, or strategist.

E. THE STRATEGIST

These models and concepts simplify the complexities that the strategist considers. He views both the organization's current situation and the potential to assume more advantageous positions, such a focus is the very core of strategy and management. Drucker pronounces this as the first task of top management, saying:

There is, first, the task of thinking through the mission of the business, that is, of asking the question "What is our business and what should it be?" This leads to the setting of objectives, the development of strategies and plans, and the making of today's decisions for tomorrow's results. This clearly can be done only by an organ of the business that can see the entire business, that can make decisions that affect the entire business; that can balance objectives and the needs of today against the needs of tomorrow; and that can allocate resources of men and money to key results. (Drucker, 1974, p. 611)

The strategist needs a thorough knowledge of his own organization (especially strengths and weaknesses) to perform the functions listed by Drucker. More importantly, he requires perspective on the external environment to identify threats and opportunities and to select the proper niche. Finally, he needs the authority to cause execution of the strategy. These requirements for knowledge and vision limit the strategy function to top management. Thus,

creating a niche is merely combining (or developing) the organization's abilities with the opportunity where they can best succeed.

Besides vision, requirements for authority also place the strategy function in top management. Once the strategist selects the niche, he must have the authority to direct the organization towards that niche. He accomplishes this directing with control systems, including the budget.

The knowledge, vision, authority and control components from business strategy overlap extensively with applications in the military. With frequent exchange of leaders between the two systems, such overlap is not surprising. The next section compares the business and military concept of strategy to identify similarities.

F. MILITARY STRATEGY

The use of force separates military from corporate strategy, yet many of the processes and decisions parallel the business concept. Common definitions of military strategy emphasize the unique use of power. Liddell Hart defines military strategy as "the art of distributing and applying military means to fulfill the ends of policy. (Liddell Hart, 1968, p. 335)" This mirrors Clausewitz, who said "war is nothing but the continuation of policy with

other means (Clausewitz, 1976, p. 69)." The U.S. Joint Chiefs of Staff defines military strategy as:

The art and science of employing the armed forces of a nation to secure the objectives of national policy by the application of force, or the threat of force. (Lykke, 1989, p. 3)

Even though use of force dominates this idea, many of the techniques employed coincide with the business model. Opposing forces seek to develop and exploit some comparative advantage. In military settings, comparative advantage can stem from many sources, including surprise, morale, training, technology, force size or geography. Business leaders also seek to gain these types of advantages in their environment.

Business and the military depend on the same techniques to implement strategy. As Admiral Watkins said in his description of the Maritime Strategy: "Command, control, communications, and intelligence combine to form the glue that binds this entire effort together." (Watkins, 1989, p. 2) The military emphasis on the functions of Command, Control, Communication, and Intelligence (C3I) fits the formulation and implementation phases ascribed to the strategic process in business.

1. Formulation Phase

The intelligence activity gathers information on the opponent's strengths and weaknesses to initiate the formulation phase. Command activities calculate the

futurity of present decisions and develop alternatives. Communication forms the links between all activities, transmitting information to and decisions from the command level.

2. Implementation Phase

The commander selects the best strategy and issues directives to combine forces and execute tactics. (This parallels the budget in the business organization). In a military scenario, the commander plans a series of battles, a campaign, which will acquire the ultimate objective. In each of these battles, he selects conditions where the comparative advantage will yield victory. Through communication, the commander transmits the plan and receives status reports on its execution.

Again key factors must be targeted, for example, control of certain areas by certain times. If these objectives are not met, the commander must conduct control activities - commitment of additional forces. Command must monitor the environment for changes or failures in the strategy; when these occur, command executes a preconceived alternative or reformulates the strategy.

3. Conclusion

The military model closely parallels the business model of strategy. As Andrews observed:

Deciding what an organization should do and getting it done are the universal functions of an organization leader, in business or out (Andrews, 1980, p. xiv).

The similarities stem from the common forces in the respective environments listed on page 6. Each organization also must formulate and implement a strategy using a system similar to that developed by Andrews. The strategist evaluates the environment, just as Porter depicts the businessman analyzing industry conditions seeking comparative advantage. Once this advantage is identified, leaders in either organization decide on strategic thrusts, as shown in Ansoff's model.

The budget plays a critical role in these processes because it shows the relationship of acquisition, transformation, and output of the financial resources which support the strategy. All of these tools assist the strategist in developing and executing his strategy. Regardless of the model selected, strategy itself needs systematic analysis to evaluate effectiveness in advance. This is the subject of the next section.

G. EVALUATING STRATEGY

The process for evaluating strategy also confirms the consistency between business and military theories. To evaluate a prospective business strategy before execution, Rumelt proposes the following criteria:

Consistency: The strategy must not present mutually inconsistent goals and policies.

Consonance: The strategy must represent an adaptive response to the external environment and to the critical changes occurring within it

Advantage: The strategy must provide for the creation and/or maintenance of competitive advantage in the selected area of activity

Feasibility: The strategy must neither overtax available resources nor create unsolvable subproblems. (Quinn and others, 1988, p. 51)

Although these precepts address business, they are equally valid for military applications and mirror the model and ideas previously presented. The importance here is not to define a universal concept of strategy, but to develop a particular theoretical model and to test it by applying it to the Coast Guard Reserve. This provides a prototype which the organization may alter to produce a more appropriate model. An eventual model will assist the organization in practicing strategy. As Bryson noted, the first step in strategy is: "Initiating and agreeing on a strategic planning process. (Bryson, 1988, p. 69)"

Only the strategist can designate the appropriate model. His position and experience provides the best perspective to select the model. His authority is necessary to implement the strategy. His decision on model selection is subject to ultimate controls as explained in the next section.

H. ULTIMATE CONTROLS

One major difference between military and business is the nature of their ultimate control system. A business

seeks profit and the military seeks to create peace, or in the event of war, according to Liddell Hart, "a better state of peace, even if only from your own point of view (Liddell Hart, 1968, p. 366)." Without profit, a business cannot survive. To achieve peace, military organizations need the willingness and ability to project force. So, although the mechanism is different, each organization has an ultimate control system that supercedes the immediate process and eventually indicates the success of the strategy. These controls again refer to the initial reason for practicing strategy: survival of the organization, which enables further accomplishment of organizational goals.

This master control mechanism is much less apparent in government organizations. A government activity depends on a healthy economy of commercial activities which provide a tax base and revenue to finance its activities. At some level, the tax burden of government will restrict the prosperity of business. This in turn diminishes the tax revenues that fuel government's activities. Then government must reformulate its strategy, (just as military and business organizations) in order to survive when its ultimate control mechanism, tax revenue, is triggered. Drucker supports this contention, saying:

There are limits to what government can actually raise. There are even narrower limits to what government can raise without damaging the economy seriously or undermining the cohesion of the body politic....Above

it, increased government revenue will not stimulate the economy. It will either depress it and create what we now call "stagflation," or it will create mounting inflationary pressures....Raising the share that government takes of the country's income above this threshold does not even produce increased revenue. Revenue may actually go down. (Drucker, 1989, p. 73)

No strategist, regardless of his environment, can ignore the ultimate control system. Losses in business, casualties in warfare, and tax revenues in government become the critical constraint on a strategy's success in the respective environment. The challenge of strategy becomes the ability to constantly relate ends and their means. As Liddell Hart cautions:

Adjust your end to your means. In determining your objective, clear sight and cool calculation should prevail. It is folly 'to bite off more than you can chew,' and the beginning of military wisdom is a sense of what is possible. (Liddell Hart, 1968, p. 348)

Thus, the strategist needs a method to relate resource consumption with accomplishment of objectives. Without such a gauge, the strategy risks failure through attrition. Budgets fill this need, linking organizational goals and their costs.

I. CHAPTER CONCLUSION

This chapter presented strategy as a system concerned with critical decisions on purpose and the future, in response to competitive conditions. Strategy involves a complex process of formulation and implementation. This

strategic process develops and uses a comparative advantage to exploit a situation and achieve goals, including domination and survival. The strategist selects the comparative advantage and arena for competition after analysis of the external environment's threats and opportunities. He combines this knowledge with his understanding of internal organizational strengths and weaknesses. His authority allows him to direct the organization towards implementation of the strategy.

The practice of strategy addresses the following questions:

- What are the organization's goals ? (Goals)
- What is the environment ? (Environment)
- What are the alternatives ? (Alternatives)
- What are the consequences of alternatives ? (Futurity)
- What is our comparative advantage ? (Advantage)
- How can we best exploit the situation ? (Niche)
- How should we structure ? (Organization)
- How will we control implementation ? (Control)
- How will we evaluate the success of the strategy and the need for adaptation ? (Evaluation)

The budget serves as a control mechanism, estimating and measuring a goal by its cost. Whether in business or military, the strategist obtains and transforms resources into some organizational output. In this way, the processes of business and military strategy are similar; however, each has a different ultimate control system, related to the survival of the organization. Here again the budget provides a gauge, relating cost, progress towards goals, and

survival. The strategy can be evaluated on the basis of consonance, consistency, feasibility, and advantage.

The next chapter will use these ideas on budgets and strategy as criteria for analysis of the Coast Guard Reserve.

III. STRATEGY AND THE COAST GUARD RESERVE

A. CHAPTER INTRODUCTION

This chapter describes the strategy of the Coast Guard Reserve using the strategy model developed in the previous chapter. Because no explicit strategic plan exists for the Coast Guard Reserve, other documents such as the program description, budget, and the Commandant's Long Range View, will provide information to reconstruct the strategy. A discussion of strategy first requires identification of competitors; section B will cover this topic. The next section describes the formulation phase including the goals and environment of the organization. Following this, alternatives and their futurity are examined. Finally, a review of control systems, including the budget, illustrates the implementation of the strategy.

Note that the mesh of management activities intertwines each of the following sections. Because of this mesh, the starting point is less important to strategy than relating the decisions on "what to do" and "how to do it." This chapter seeks to reconstruct the answers to those questions from the perspective of the Coast Guard Reserve.

B. COMPETITORS

Addressing competition and comparative advantage requires identification of the opponent. However, government agencies are different as Stegletz contends:

Government enterprises differ from private enterprises in two important ways: they do not have to worry about bankruptcy, and they usually do not have to worry about competition. (Stegletz, 1988, p. 199)

Porter's model provides a convenient framework to question Stegletz's contention, by identifying the suppliers, new entrants, buyers, substitutes, and intensity of rivalry.

- Suppliers include taxpayers/Congress (funding) and labor market (manpower).
- New entrants are generally restricted by the legal mandate from Congress to perform specific missions.
- Buyers generally do not exist, since services are provided as public goods, free of charge. However, consumers of the services do exert political pressure on Congress to provide funding to the Reserve.
- Substitutes are generally restricted also by the legal entry barrier provided by the Congressional mandate.
- The intensity of rivalry will be examined below.

The Coast Guard Reserve faces political, economic and military competitors. By definition, competition requires an adversary, and any advantage is relative, applying only to a specific opponent. The output of government agencies is generally protected from competition by a legal mandate which designates them as the sole provider of a particular service. In this sense, the Coast Guard Reserve confronts no competition.

As a U.S. military force, the Coast Guard exists to counter external threats of force in the international arena. Its wartime strategy must identify likely competitors and develop plans to dominate potential sites of conflict. Such a military focus is not the primary aim of this thesis. However this military purpose must be considered, as it provides an ultimate focus for the organization's resources.

Within government, agencies face political competition in the Congressional arena for funding. The size of the force funded by Congress can become a comparative advantage against the wartime adversary. The comprehensive strategy must recognize this competition for Congressional funding, even though there may not be a specific competitor offering the same services as the Coast Guard Reserve.

The Coast Guard faces economic competitors as it recruits manpower to perform the organization's missions. This competition differs little between the public and private sector. Within the military, other services can become competitors for entry-level youths.

Thus, the Coast Guard Reserve faces multiple competitors. Strategy hopes to relate a means to dominate these competitors, who change with the focus. As shown in the model, an organization prevails by exploiting some comparative advantage in either obtaining resources, transforming them into products, or delivering the eventual

output of the organization. The political and economic competition occur in obtaining resources; the military competition occurs in delivering the eventual output.

C. COMPARATIVE ADVANTAGE

The main advantage that a government agency holds over any possible output competitor is the barrier to entry represented by the legal mandate to perform the mission. A cost leadership strategy can erect a further barrier to entry. In the current government climate of restrictive financing, cost leadership is an excellent supporting strategy.

This approach particularly suits expansion of an agency into related or multiple missions, which build on existing duties. If little marginal cost is incurred to accomplish the new tasking, fixed expenses are spread over a wider range of activity, further decreasing unit costs. Such a scenario serves as a possible explanation for the inception of the Maritime Defense Zone.

The Navy faced increasing global responsibilities and saw the Coast Guard as the relatively low cost provider of needed security in U.S. coastal zones. Procurement costs for providing the Coast Guard with upgraded communications and weapons systems were minimal compared to the Navy's cost of constructing a separate capability.

The Coast Guard Reserve similarly enjoys this type of comparative advantage and fills needs in the active duty Coast Guard. The Coast Guard has increasing responsibilities in all mission areas. In certain missions the Reserve is the low cost provider of manpower. Those situations occur, where Reserve training programs can meet the skill needs at a cost lower than an active duty resource.

So, even though government agencies generally lack a profit mechanism, the Coast Guard Reserve faces competition at many levels. Even with a legal mandate to perform the mission, competition for resources occurs in the Congressional arena against other agencies. The military competes for manpower in the general society. As an armed force, the Coast Guard prepares for competition against international opponents. Given this general framework of competition, strategy formulation seeks to develop alternatives which exploit the desired comparative advantage at the multiple levels of competition, facing various opponents.

D. FORMULATION PHASE

The formulation phase includes defining the organization's goals, assessing the environment, and developing and evaluating the futurity of alternative strategies.

1. Goals

The Coast Guard Reserve defines its goals as follows:

The purpose of the Coast Guard Reserve is to provide trained units and qualified persons for active duty in the Coast Guard in time of war or national emergency. (U.S. Coast Guard, October 19, 1988, p. 2)

The organization that evolves from this goal will depend on the amount of resources obtained and the transformation of these resource to provide output. The financial resources obtained will depend on political decisions in Congress. Financial resources will impact the economics of recruiting manpower. Transformation by training will determine the capability of the force to perform in war or emergencies.

Congress sets the broad goal for the Coast Guard Reserve in authorization and appropriation bills. Internally, the Coast Guard Reserve establishes subordinate goals for resource competition, transforming processes, and capability of the final output. Information in the budget and other control systems reveals the strategy's emphasis in these subordinate areas. To meet the overarching goal, strategy considers the environment to discover ways of gaining or exploiting a comparative advantage. Subordinate goals may be established relative to specific threats and competitors. Strategy attempts to relate these subordinate goals to accomplishment of the overarching goal.

2. Environment

This section examines environmental conditions. The environment substantially impacted the Coast Guard, especially the Reserve's two primary resources: people and money. Economic conditions changed competition for funding with other agencies in Congress. Demographic factors changed competition for manpower. The demand for Congressional funding is increasing, and the availability of manpower for the Armed Services is decreasing. These environmental conditions affected the resources obtained by the Coast Guard. In turn these resources constrained the Coast Guard as it attempted to perform its missions.

a. Resources: The Input Environment

The labor force is changing due to the following demographic trends:

The population 18 to 24 years peaked in 1981 at 30.5 million--a total that may not be surpassed for at least the next 100 years. This "military-age" group will decline by around 7 million through 1996 and then gradually increase again to peak at around 27.7 million in 2010 (comparable to the population level in 1987)....

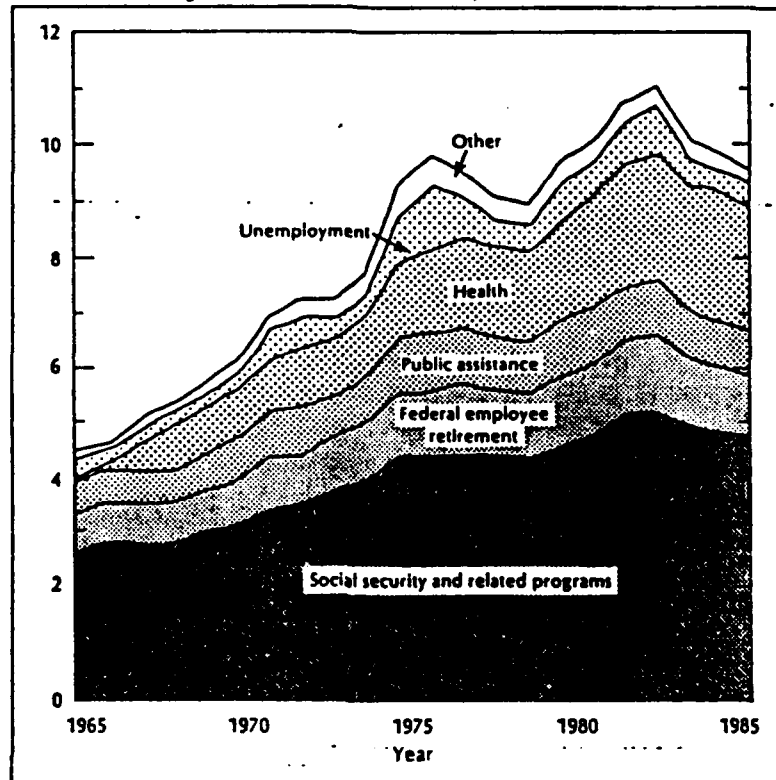
From 1972 through 1984, the population of 19-year-olds exceeded 4 million each year, peaking at 4.5 million in 1980. For most of the 1990s, the 19-year-old cohort will number fewer than 3.4 million, about three-quarters the size of the 1980 level. In the year 2010, it is projected that there will be 3.9 million persons at this age, historically the median age of military recruits....

The U.S. population is aging: the median age nationwide was 31.5 years in 1985; in 2010, the median age is expected to be more than 5 years older, as the youngest members of the "baby boom" generation (born between 1946 and 1964) celebrate their 46th birthday. In 1985, there were 28.6 million Americans age 65 or older, representing just under 12 percent of the population. In 2010, the number of persons in this age

group will be about 39.2 million, constituting close to 14 percent of the total population--with those 80 or older numbering almost 8 million more than in 1985. (Eitelberg,1983,p. 7)

The Coast Guard strategy competed for Congressional funding to meet all its program needs, including expected increases in recruiting costs. At the same time, competition for Congressional funding increased from other agencies in the Federal government, driven in part by the same demographic trends. The aging population requires increasing resources in entitlement areas as shown in figure 5, on the following page.

Entitlement Payments for Individuals as a
Percentage of Gross National Product, Fiscal Years 1965-86*



*Social security and related programs includes old age and survivors' insurance, social security disability insurance, and railroad retirement. Federal employee retirement includes military and Coast Guard retirement pay, civil service and foreign service retirement and disability, and compensation paid to veterans and their survivors as a result of service-related death or disability. Public assistance includes supplemental security income, grants to the states for aid to families with dependent children, food stamps, the earned income tax credit, and veterans' pensions. Health includes medicare hospital insurance, medicare supplementary medical insurance, and grants to the states for medicaid. Unemployment includes unemployment compensation, trade adjustment assistance, and federal employee unemployment benefits. Other includes child nutrition programs, the special milk program, guaranteed student loans, veterans' readjustment and education benefits, coal miners' (black lung) disability benefits, special workers' compensation expenses, Veterans' Administration burial benefits, and the national service and U.S. government life insurance fund for veterans.

Source: Kent Weaver, "Controlling Entitlements," in John E. Chubb and Paul E. Peterson, eds., *The New Direction in American Politics* (Washington, D.C.: Brookings, 1985), p. 313.

Figure 5 (Wildavsky, 1988, p. 270)

Besides demographic trends, Gramm-Rudman further squeezed government spending, by limiting spending to revenue from taxes plus a declining deficit balance. With continued gains in entitlements and limited growth in government spending as a result of Gramm-Rudman, the Coast Guard faced increasing competition for the remaining dollars in the Federal budget.

b. Missions: The Output Environment

The competition for input resources is a means to an end. The desire for increased funding and manpower serves the goal of providing more output to the eventual consumers of the organization's goods and services. As Turner noted in his discussion of Navy missions,

...we must emphasize output....because a nation of concerned free citizens and skeptical taxpayers is naturally more interested in what is harvested than in what is sown. (Turner, 1974, p. 2)

The focus on output forces an organization to articulate its value. That is, an organization must compare the results of its existence versus the absence of that organization. The results of this analysis should show that the benefits are greater than the costs; in other words, some value is created by the organization.

Wildavsky identified the general tactic in using output to compete for Congressional funding as "Find a clientele....Serve your clientele....Expand your clientele (Wildavsky, 1988, p. 101-02)." The clientele provides a

means to lobby Congress for increased appropriations. Because of diversity in peacetime and wartime missions, the Coast Guard's clientele will vary with the mission. Lack of a single large client limits the Coast Guard's power to influence the Congressional appropriations process.

Diversity among clients adds and detracts from the Coast Guard. One possible benefit is the more efficient delivery of services. To the extent that the Coast Guard does not fully employ its resources performing current missions, another new or expanded mission can absorb some of the slack, without increasing overall cost. Such a process can amalgamate several smaller interest groups into a larger more politically powerful entity.

Conversely, the same procedure can provide a dysfunctional force, when the goals of these interest groups do not coincide. Selection of one goal alienates the proponents of the opposing goal. The alienation affects supporters both inside and outside the organization. Coast Guard leaders face a challenge to balance these competing roles and missions, where they do not overlap. The leadership's juggling ability impacts internal morale and external political support.

The competition for funding overlaps the competition for the legal mandate to perform solely the assigned government functions. Nearly every mission of the Coast Guard is peripherally performed with other government

agencies. For example the Drug Enforcement Agency, Customs and the Coast Guard all perform some drug interdiction in the maritime regions. The Department of Defense also is being tasked with an expanded drug interdiction mission.

With the exception of Ice Operations, Marine Licensing, and offshore Maritime Search and Rescue, the Coast Guard shares some portion of its remaining eight missions with other organizations. For a listing of Coast Guard missions and their competition, see Appendix A. These overlaps in mission responsibility result both from politics and concerns for efficiency. Assignment of an additional mission can absorb slack, making government more efficient. However, redundant capabilities can also inflate the overall cost of providing government goods and services.

This concern for government efficiency helped the Coast Guard assume a formal role in the Maritime Defense Zone. The Defense Department's need to protect its supply chain, including origins, coupled with increasing Defense budgets in the 1980's was a catalyst for the Maritime Defense Zone concept. New Navy commands (headed by Coast Guard Vice-Admirals, directing Navy and Coast Guard units) were quickly established to defend U.S. coastal areas and vital ports of embarkation.

However, this concept also introduced a very real threat of competition. This threat materialized in military operations centers when Navy reservists worked

interchangeably in billets also filled by Coast Guard reservists. Significant capabilities also exist within the Navy in small boats, riverine, and other coastal patrol activities. These capabilities can substitute for the Coast Guard or its Reserve.

A similar situation occurs in peacetime missions.

In 1972, the Congress mandated that the Coast Guard Reserve augment the active service as a peacetime mission. (Sparks, 1989, p. 1-5)

Unfortunately, any increased performance of peacetime missions by Reservists could reduce the need for active duty resources to perform the same mission. The active duty Coast Guard may oppose growth of the Reserve, if it accompanies a decline in active duty strength. And the assignment of peacetime and wartime missions injects the issue of balance between the two missions, additional competition for the organization's resources.

c. Environment; Conclusion

Investigating the environment identified increasing competition for resources. Other government agencies desire funding; civilian and military organizations compete for manpower. This competition extended to the output arena, where organizations' missions encroached on opponents. Some agencies expanded, assuming missions that complemented their existing purposes. The Maritime Defense Zone concept exemplified this expansion by the Coast Guard.

However, this mission blurs the distinction between services, especially as manpower sources. This potentially threatens the Coast Guard Reserve's status as the sole provider of manpower to meet expanded Coast Guard needs during wartime. Wartime preparation also competes with peacetime responsibilities. The strategy, through control systems, needs to balance application of the organization's resources between the various competitors for output. The strategy also needs to relate its output to resource requirements, to compete for those resources.

3. Futurity and Niche

The next stage in the strategy model aims to develop alternatives and examine their futurity. Alternatives pertain to the military, political, and economic arenas. The military futurity concerns the consequence of mobilizing the force in wartime or national emergency. This calculation determines force size, training level, and training focus. Similarly, the political futurity concerns the cost of devoting additional resources to government and the mix of different agencies within the government. The economic futurity examines ways to attract manpower.

The futurity questions integrate information obtained in the goals and environment sections. During the 1980's, the national agenda emphasized both Defense and Drug Enforcement. This environment potentially favors the Coast Guard and its Reserve, with missions in both of these areas.

a. Military

During the 1980's the Coast Guard revitalized its wartime planning efforts. War plans were updated and exercised. The source for much of this effort may have been political. But the net affect was a closer examination of these missions. Focusing on war and national emergencies brought the mainstream of the Coast Guard closer to the mission of the Reserve.

The active duty Coast Guard retained responsibility for drafting and executing war plans. The Reserve Program served as a manpower broker to provide trained personnel, who would expand existing units. Thus, the Coast Guard Reserve emphasized people and training. It did not have to identify a war strategy, only develop manpower in response to the strategy's military needs.

b. Political

From FY 1980-FY 1989, the authorized strength of Department of Defense reserve components rose 38.1% and appropriations increased 83.4% (in constant FY 80 dollars) (U.S. Coast Guard, July, 1989, p. 2). Because Congress traditionally funds DOD at 95% or more of their estimated wartime needs, the Coast Guard wanted its reserve to mirror the Department of Defense (DOD) in relative size.

Coast Guard staffing in the early 1980's was approximately 50% of their estimated wartime needs. Public Law 100-180 directed

the Secretary of Transportation to submit to Congress a plan to enable the Coast Guard to meet 95% of its wartime mobilization requirements by 30 September 1988 (Department of Transportation, 1988,p. 1)

This Congressional mandate also focused attention on the question of force size. The Secretary's response indicated a shortfall between "7,800 and 14,125" persons (Department of Transportation,1988,p. 1). Once political forces encouraged this alternative, the Coast Guard devoted few resources to developing other options.

Given their goals and short term environment, the Coast Guard emphasized growth. The growth focus takes full advantage of the political environment in Congress, but, it also implied emphasis of wartime over peacetime missions.

c. Economic

The military enjoyed recruiting success in the 1980's in spite of the demographic trends. The strategy's concern with obtaining personnel resources depended on educational benefits.

Today there is recognition in all circles that educational benefits can be a very important attraction of military service; and, furthermore, these benefits can be targeted to specific markets of highly qualified youths. (Eitelberg,1988,p. 17)

However, other competitors in the labor market will match these enticements if they want to compete. Other armed services use different levels of educational benefits to aid in recruiting. The inescapable impact of this

declining supply of manpower is that the recruiting environment will become more competitive, given the same demand for entry level personnel. In response to the increasingly competitive market, the Coast Guard transferred recruiting responsibility to newly created Regional Recruiting Commands in 1986.

d. Budget Confirmation of Strategy

During the 1980's the budget institutionalized a basic structure of expenses for the Reserve Program. The budget process focused on changing these costs only marginally. These changes depended on expansion or contraction in the size of the reserve force. Accordingly, this evidence confirms the Coast Guard Reserve's formulated strategy. The following summary of the FY 1989 budget shows planned expenditures (in \$ thousands):

Reservists' Weekend Drill Pay (IDT)	24,700
Reservists' 2 Week Annual Training Pay (ADT)	<u>9,500</u>
Subtotal	34,200
Uniforms	500
G.I. Bill	900
FICA	500
Exercises	600
Instructors	200
Recruit Training	<u>3,900</u>
Subtotal	6,600
Support Facilities Operations/Maintenance-	
Reserve Training Center Yorktown	2,800
District Offices	1,000
Headquarters	600
Program Support	2,200
Other	<u>200</u>
Subtotal	6,800

Support Personnel-	
Military	16,600
Civilian	2,200
Staff Travel/Boards	500
Flags	<u>100</u>
Subtotal	19,400
Grand Total	67,000

Internal budget development documents revealed limited analysis on these "base" expenditures. Management emphasized incremental changes to this base, in the Resource Change Proposal process. Requests for Congressional appropriations defended this base and proposed increases.

The highest priority for increased funding focused on increasing the number of Selected Reservists, compared with quantitative or qualitative change in any other areas or aspects. Recruiting received constant emphasis from 1986-1988. The Rear Admiral heading the Reserve program wrote personal letters to District Commanders encouraging them to recruit additional reservists, even if those numbers slightly exceeded authorized strength ceilings. Growth was the primary focus for budget increases in fiscal years 1988 and 1989. In 1988, the number one priority was to increase reserve manpower by 500 persons, at an additional cost of \$5.7 million (Coast Guard, 1986, p. 3). In 1989, the service faced increased competition in recruiting. To meet this challenge, they requested funding for additional reservists and a larger recruiting force (Coast Guard, 1987, p. 1), while lower priorities addressed training programs.

4. Formulation Conclusion

This analysis has shown that the Coast Guard Reserve has no formal process for formulating strategy. Examining goals, the environment, alternatives and their futurity, and the budget process allowed inference of one main alternative:

- Mirror the Department of Defense and request manning at 95% of wartime requirements
- Focus on the size of the Reserve Force as the key issue
- Maintain the current resource base, and attain growth through increased Congressional funding

This addressed the initial questions in the strategy model:

- What are the organization's goals ? (Goals)
- What are the consequences of alternatives (Futurity)
- What is the environment ? (Environment)

However, formulation and consideration of alternatives appears to be limited. Inertia, political forces, and lack of staff to develop alternatives, all played some role in limiting the development and consideration of alternatives.

The implied strategy concentrated on the input arena, competing for additional resources. This concentration linked to the output focus of the Maritime Defense Zone mission. There is no direct evidence to confirm the comparative advantage that the Coast Guard Reserve sought to obtain, develop, or exploit. The general nature of government organizations confirms that an entry barrier exists to legally restrict competitors to the Coast Guard Reserve.

The Coast Guard reorganized its district offices and headquarters to merge war planning and reserve management under a staff element entitled Readiness & Reserve. No lower field level reorganizations occurred. The net affect was to formalize under one manager, the resources responsible for developing and executing the Coast Guard's wartime strategy, with the resources responsible for training reservists who execute part of that strategy. Otherwise, planners postulated an expansion of the existing organization to absorb any growth in the Reserve force. Information in the implementation phase confirms these conclusions.

E. IMPLEMENTATION

The final question in the strategy model concerns controlling implementation. The Coast Guard accomplishes implementation with the budget and a series of management reports. These include spending, activities, and readiness reports.

1. Budget

The budget is a control mechanism for implementation; it sets targets for expenditures. The budget translates the strategy into financial terms. Control activities depend on these quantitative measures to monitor and enable implementation. Monitoring budget execution, comparing actual expenditures against these

targets, identifies problem areas for corrective actions. Full expenditure of all money appropriated by Congress is critically important to the growth strategy. It is hard to request more funding next year, when an agency has not spent a smaller amount in the preceding year. Wildavsky illustrates this situation by saying:

If an agency has a substantial carryover, the Budget Bureau and especially the appropriations committees may take this as a sign that the agency does not need as much as it received and may cut off that amount in the future. (Wildavsky, 1988, pp. 89-90)

This explanation also applies to recruiting. There the Reserve sought to show that it would fill all existing billets as a prelude to requesting additional manpower.

2. Spending and Activities Reports

Quarterly spending summaries report status of funds and ledger obligations. The status of funds report advises intentions to fully spend the budgeted amounts for a quarter. Reporting occurs two weeks before the end of the quarter. The ledger obligations show the amounts obligated for specific purposes during the quarter.

The activities reports summarize man-hours or days of training activities performed by reservists. Monthly reports list the weekend drills, and quarterly reports count the two week active duty training periods. Apportionment targets for time spent on weekend drills include 65% augmentation, 25% formal training, and 10% unit

administration. The two week active duty training report includes the number of total days according to the major training activity performed in the period. Again, existence of these reports suggests the importance of fully spending budgeted amounts and completing a prescribed quantity of training activities.

3. Readiness Reports

Although the activities and spending reports provide a picture of expenses (what was done), the readiness reports address efficiency and effectiveness (how well it was done). These inspections grade individual reserve units on their preparations to respond to a general war mobilization. The emphasis in this report shifts from resource consumption to results.

The readiness evaluations would indicate any degradations in force quality. However, substantial revisions to this evaluation during the 1980's negate comparisons. The emphasis of this report on wartime missions implies that a unit commander's success depends more on the ability to prepare for war versus peacetime missions.

F. CHAPTER CONCLUSION

This chapter traced the current Coast Guard strategy through the model outlined in Chapter II. The Coast Guard faced increased competition for Congressional funding and

workers. In response, it emphasized military missions and drug enforcement as a means to compete for funding and growth. Educational benefits and reorganization of the recruiting function helped to compete for manpower.

Internal control activities identified the key activities critical to the success of the Coast Guard's strategy. Controls focused on full consumption of resources, full performance (quantity) of training activities, and readiness of reservists for general mobilization. These indicators combine to confirm the organization's strategy.

The next chapter evaluates the success of this strategy, and identifies problems and their causes. Such analysis will not solve tomorrow's problems. The continuous change in the environment dictates constant evaluation and adaptation by any organization practicing strategy.

IV. EVALUATION OF THE STRATEGY

A. CHAPTER INTRODUCTION

This chapter evaluates the strategy outlined in the previous chapter. Evaluating any strategy requires some device for measurement against criteria and standards. The Coast Guard Reserve has no formal documentation of its strategy, which would indicate its aspirations in the spectrum between survival and domination. The Coast Guard Reserve's strategy clearly called for growth, but such a gambit could easily serve to conceal a more modest goal of survival. Therefore the evaluation in this chapter is relative to some assumed goals of the strategy.

Besides the goal of growth or survival, the strategy can be measured by adherence to strategic principles. Based on these various measures, different degrees of success occurred. Where some weaknesses are identified (relative to a specific goal), analysis will indicate problems and their causes. Chapter V will develop some specific solutions. However, the entire evaluation of strategy and its success, as Liddell Hart cited, depends on your "own point of view."

B. ORGANIZATIONAL GROWTH/SURVIVAL

From FY 1980-1989, Selected Reserve strength grew 11.1% and appropriations grew by 4.0% (in constant FY 80

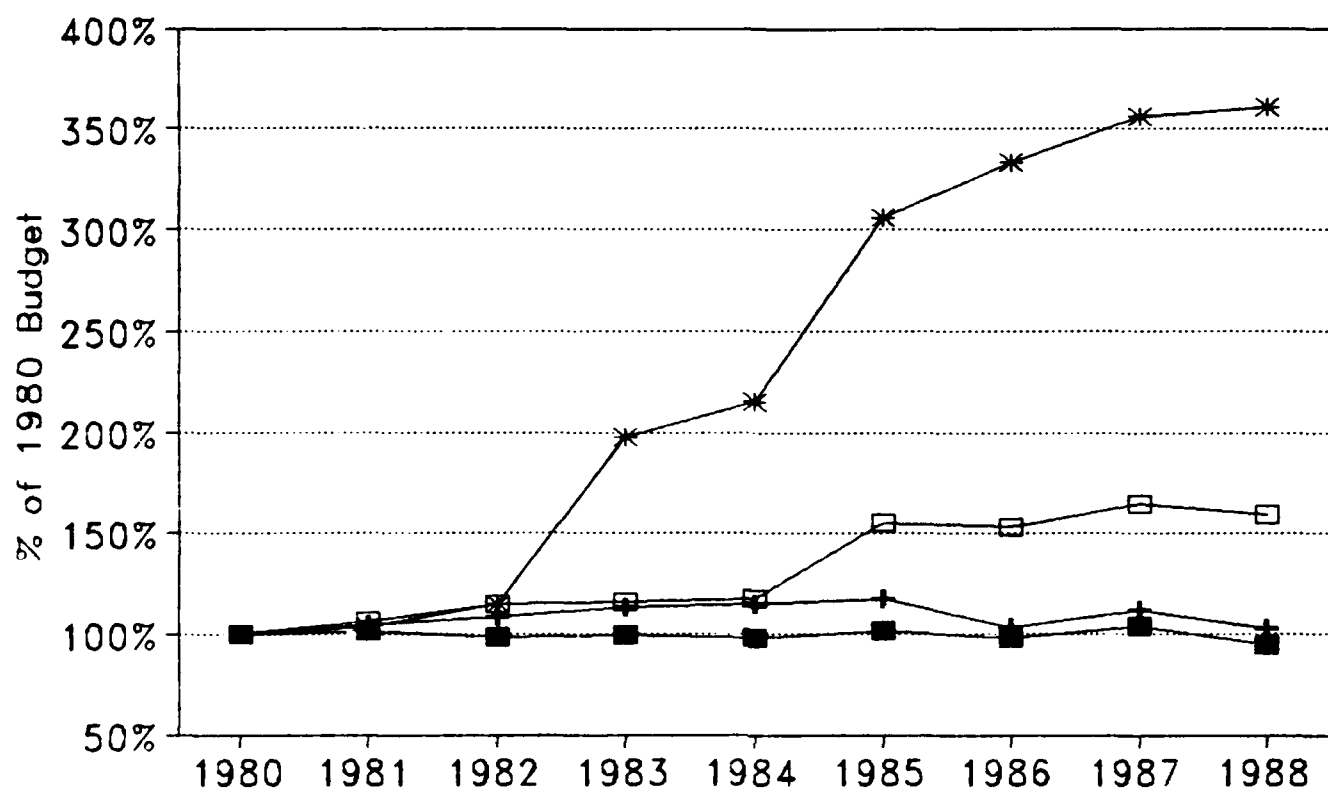
dollars)(Coast Guard, November, 1989, p. 2). The ratio of force size to appropriations suggests that either fewer relative dollars delivered the same or higher quality force due to increased efficiency, or holding efficiency constant, the force size grew while the quality declined. Confirming the correct conclusion requires a definition of mission performance, and no such definition exists. A mix between the two alternatives is also possible, but again unprovable.

When viewed in annual increments, the strategy's manpower quantity results declined in 1988 and 1989. From a peak of nearly 13,000 in 1987, strength declined to just over 12,500 in 1988, and to approximately 12,200 in 1989 (Coast Guard, November, 1989, p. 2). Funding also peaked in 1987 at \$70M, declined \$5M in 1988, and recovered to around \$67M in 1989. (All figures in constant FY 89 dollars.) The appropriation in FY 89 differed by only 4% from the funding levels of FY 80 (in constant FY 89 dollars).

Compared to the growth of the active duty Coast Guard, Navy and Navy Reserve, the Coast Guard Reserve declined. Figure 6, on the following page, shows the time trend during the 1980's of these organizations' appropriations. All dollars are in 1989 dollars; and 1980 equals 100%.

Appendix B contains the data used to construct Figure 6.

Comparison of Navy and Coast Guard Active and Reserve



■ Coast Guard Re + Coast Guard A * Navy Reserve □ Navy Active

Figure 6

If the strategy's goal was growth to a force size of approximately 20,000 selected reservists, then the strategy was unsuccessful. However, if the goal was to maintain the selected reserve at 1980 levels, then success occurred. The main reason for failure to achieve growth is unsuccessful competition in the Congressional arena for funding. Based on desires to expand the size of the Reserve force, future strategy must develop some means to obtain additional funding.

C. THEORETICAL VALIDITY OF STRATEGY

A theoretical basis can also evaluate the success of a strategy. The criteria for evaluating strategies from page 23, identified four main areas: consonance, consistency, feasibility and advantage. In retrospect, each of these factors influenced and limited the Coast Guard Reserve's strategy. Some of the strategy's problems appeared in more than one area. Examining each of the four main areas will identify these problems.

1. Consonance

The consonance criterion focuses on the previously discussed desire for growth. The criterion states that:

The strategy must represent an adaptive response to the external environment and to the critical changes occurring within it. (Quinn and others, 1988, p. 51)

Changes in the environment indicated an increasing competition for resources. The Reserve hoped to compete for

additional funding by documenting serious manpower shortfalls. The consonance aspect reaffirms conclusions from section B. in this chapter.

2. Consistency of Goals and Policies

The consistency criterion states that:

The strategy must not present mutually inconsistent goals and policies. (Quinn and others, 1988, p. 51)

The organization's goal continues to be providing a trained force in time of mobilization. The strategist knows from his study of the environment, that competition for resources is increasing. This may mean reduced resource levels for the Coast Guard Reserve. If so, the resources obtained should be focused on the most important goals of the organization.

For example, training the wrong people for the wrong mission will squander scarce resources. Such inefficiency compromises an agency's credibility with Congress. Within the organization, such contradictions deflate morale. The Congressional affect diminishes the agency's ability to compete for increasingly coveted resources.

The goal of providing a trained force in time of mobilization can vary depending on the force size, level of training, and type of war, national emergency or mobilization. The control systems confirm to subordinate managers the emphasis among these goals as desired by top management. But the control systems contain some inherent

limitations that confound the communication of organizational intentions. However, control systems were effective if the goal was maintaining the size of the Reserve force at 1980 levels.

Given additional goals, the control systems were less effective. Coast Guard directives task Reserve Units with training for mobilization. An additional goal emphasizes that 65% of that training should occur as augmentation, where performance of a regular peacetime mission effectively trains reservists for their mobilization assignment. The opportunity for augmentation varies dramatically between reserve units, and this variance creates consistency problems within the goals of the Reserve.

A unit's location adjacent to its mobilization site allows the opportunity to accomplish augmentation. Augmentation requires an overlap between peacetime and wartime skills which does not always occur. Personalities at the unit level also compromise the potential to perform augmentation. The active duty Commanding Officer can preclude effective augmentation by not tasking the reservists with missions or denying access to the equipment needed to perform the mission.

Location of a Reserve Unit away from its mobilization site, or proximate to active units performing different missions creates additional limitations. For

example, a reserve unit's mobilization mission could be supervision of ammunition loading. Yet reserve units with this mission are not always located where these activities occur in peacetime. Thus, augmentation in many ways can present mutually inconsistent goals. And the budget seemingly does not distinguish between reserve units based on the degree of difficulty in completing training.

3. Feasibility

This augmentation situation coupled with a lack of budgetary response also violates the feasibility criterion. This criterion states that "the strategy must neither overtax available resources nor create unsolvable subproblems (Quinn and others, 1988, p. 51)." Unless the budget links resource levels with training needs, the Coast Guard Reserve's strategy violates the feasibility criterion. Other control reports might confirm this problem; instead, they combine with inconsistent goals to further mask the problem.

Again, control reports generally direct the Reserve field organization towards desired goals. But the time sequence for submission precludes any automatic responses which correct off-target activities. All reports arrive at Headquarters after the significant activity occurs, so, intervention can only focus on long term remedies.

Another limitation in these controls is moral hazard, a condition which occurs when, according to Baumol,

"Payment by results...elicits an attempt to change the state of nature (Baumol, 1983, p. 16)." A degree of moral hazard is present in each of these controls: the activities report, the ledgers, and the readiness evaluation (as described in Chapter III-E).

Moral hazard would compromise the activities report when weekend drill activities could be rationalized to fit more than one category of the 65-25-10 distribution (see page 45). Shifting drills from one category to another would achieve the desired distribution, even though the underlying activity did not change.

The ledgers only report amounts obligated or earmarked for a specific purpose. If managers were low on funds, nothing precludes a low estimate on the cost of a project. Manipulating data in either direction would allow the funds manager to fully obligate his appropriation.

A new accounting system being introduced in fiscal year 1990 should eliminate the potential for this practice. The new system allows real time access to managers at all levels, who can determine the amount of actual expenditures, as they occur. The potential improvement cannot be confirmed until the system is fully operational.

The readiness reports are also susceptible to moral hazard. Units can report training levels and qualifications beyond what members actually attain. Unless these basic records are checked, scores become falsely inflated.

Readiness reports only address wartime scenarios, but unit commanding officers also have responsibilities to prepare for natural disasters. However, the Coast Guard does not evaluate the state of readiness for this contingency. Here again, goals are not consistently controlled, and without resource links, they are also unfeasible.

4. Advantage

The last criterion addresses advantage, "The strategy must provide for the creation and/or maintenance of competitive advantage in the selected area of activity (Quinn and others, 1988, p. 51)." The advantage criterion shows a major weakness in not having a strategy making process. Since the advantage is not clearly identified, its creation and maintenance cannot be integrated in all the organization's processes.

The consistency and feasibility areas already demonstrated the potential for systems to become dysfunctional towards supporting the comprehensive strategy. Moreover, some advantage needs to be identified which is consonant with the environment. The Coast Guard Reserve's strategy suffered from flaws in each of the four areas evaluated. Some problems overlapped and affected more than one area. Problems in control systems of timeliness and moral hazard require solution. Strategy formulation aspires to address all of these areas simultaneously, so that solutions to problems in one area support the other areas.

The budget provides an integrating mechanism, linking the organization's goals and problems with the resources earmarked to accomplish goals and solve problems.

D. CHAPTER CONCLUSION

Chapter IV reviewed the strategy of the Coast Guard Reserve, evaluated its success and sources of problems. The Coast Guard emphasized military roles and manpower shortfalls, but the Reserve force did not grow as expected. Congress did not provide additional funding. If the goal was growth, then success was limited; if the goal was survival, the strategy was more successful.

On a theoretical basis, the strategy suffered especially from a lack of consistency and feasibility. Moreover, some systematic basis is needed to identify and implement a comparative advantage. Some means to document the efficient use of existing resources could help the Coast Guard compete for resources. Better methods of directing resources, regardless of the level received, could improve attainment of goals.

The next chapter uses the budget to propose an alternative which solves these problems.

V. IMPROVEMENTS TO PREVIOUS STRATEGY

A. CHAPTER INTRODUCTION

This chapter uses the budget to solve specific problems identified in the previous chapter, including a clarification of goals and improved control systems which ensure that attainment of goals is feasible. The budget can perform this function, but not in its present form.

The budget and other control systems currently focus on full consumption of resources. But, consumption is not the organization's goal. The Reserve intends to provide a service to the nation. And as Turner noted, the nation is more interested in output. The budget could identify output if the financial inputs were tracked as assets, in an accounting sense. The purpose of this chapter is to track the organization's resources through the budget.

The first section defines an organization's activities as expenses and assets. The next section differentiates between the various types of assets. Following this, a clarification of output is offered by viewing a skills model and the difference between present and future consumption. Finally, a control system is proposed to use the budget in its reconstituted form. By discussing the organization in

this framework, the chapter will offer solutions to some of the problems identified in Chapter IV.

B. ASSETS AND EXPENSES

Budgets describe an organization's plan for transforming resources. The Coast Guard Reserve consumes people and money, and produces various services. Accounting concepts express this process in terms of assets and expenses.

Assets are

economic resources owned by an entity whose cost at the time of acquisition can be objectively measured....A resource is an economic resource if it provides future benefits to the entity. Resources provide future benefits under any of three conditions: (1) they are money or can be converted to money; (2) they are goods which are expected to be sold; or (3) they are expected to be used in future activities of the entity. (Reece & Anthony, 1989, p. 30-31)

Expenses are

those costs which are identified with particular streams of current output as distinct from those costs...which will normally be identified with future streams of output. Costs which cannot logically be identified with any streams of output, either past, present, or future, are "losses." (Paton, 1944, p. 126)

An expense is an expired asset that produces some value. This difference between potential and consumption links assets and expenses.

The Coast Guard obtains assets in the form of appropriations from Congress. It then either transforms these into other assets, or consumes them as expenses. A

budget is an organization's plan for converting assets into other assets or expenses.

In simplest terms, unless some value remains from a budgeted activity at the end of the year, that activity becomes an expense sometime during the year. The expiration of the asset into an expense should give rise to some output desired by a consumer of the organization's services. In business, revenue would measure the desirability of the service. However, governments generally do not charge for their services. The main value in conceptualizing an organization's activities in this way is that it shifts the focus from consumption to output.

Training reservists and improving their ability to perform during mobilization is an example of converting one asset (payroll dollars) into another asset (trained reservists). Using the training to perform the mission exemplifies the expense process; consuming this asset creates an expense. The value of that service to the beneficiary should exceed the cost of providing the service.

C. PRESENT VS. FUTURE CONSUMPTION

The budget shows expiration of assets for a single year as they become expenses. Some of the remaining assets will become expenses in future years. By measuring this depreciation, the "present value" of training activities can be calculated. The "present value" concept projects

training benefits into the future to measure their residual value. Restated, the present value measures the total value of a training activity, including the decay of the skill over time.

This comparison presumes equal dollars invested today into two different training programs. The benefits or skills continue into future years, decaying at various rates. One computes the present value by measuring the skill level at regular intervals, and adding the consecutive levels. The higher score indicates the greater value per training dollar.

Placing training decisions in this framework, emphasizes the impact of attrition. The cost of a training activity could require recoupment over several years. To meet this condition, military members often agree to an additional term of service if assigned to certain training.

This format can also show the cost to the service when members retire or separate from the service, taking with them training and experience which will be expensive to replace.

In financial terms, the organization's output becomes either other assets or expenses. However, the training level of reservists is difficult to quantify in dollars, beyond the amount invested. To overcome this difficulty, some quantification of training levels is necessary.

D. OUTPUT DEFINITION AND SKILLS MODEL

Use of the budget as a control mechanism requires quantification of desired outputs, in terms of assets and expenses. No such quantification comprehensively covers the current Reserve force. A new skills model could perform this function, employing a method already used in the active duty Coast Guard.

The model should quantify the force size, training level, and training focus. The force size issue is simply a question of numbers. However, the level of training and type of mobilization complicate the issue. Skills can differ dramatically from wartime to peacetime missions, and also by the level of expertise required, and currency of skill level.

The current shipboard training system responds to a similar problem in training levels. An individual fills a billet based on his pay grade and rating, one set of skills. Different scenarios require different skill levels from the same individual. The navigation detail could require an individual to serve in his rating, for example, a quartermaster performing navigation duties on the bridge while entering port. Conversely, during law enforcement evolutions, he might perform as a boarding officer, duty unrelated to his rating. The job dictates the skills needed by individuals. Then, the Personal Qualifications System (PQS) organizes the training program to provide the

necessary skill levels for each individual according to his job assignments and regardless of his rating.

The PQS system also reflects currency of skill levels, unlike the qualification code system presently used by the Reserve. Qualification codes document that an individual completed certain training at some point in his career. With PQS, the individual must complete initial qualification and periodic recertification. Thus, PQS shows not only the progress of an individual towards certification, but his currency in the skill as well. A better vision of readiness would result from linking training shortfalls with the cost of a fully trained force.

This PQS system can expand to cover potentially any training need. Reserve billets, afloat and ashore, are now included in the PQS system. This vehicle allows measurement of an individual's training level. Thus, an aggregate skill level measurement for the Coast Guard Reserve is possible, with PQS covering all required skills (peacetime and wartime) and all individuals.

A graph can simplify individual skill issues by presenting a simultaneous picture of the various levels. Each skill assigned to an individual is represented by a bar. The level of training in that particular skill is shown by the height of the bar. The graph shows the number of individuals, their assigned missions, and training level for each mission. Figure 7 shows different training levels.

These levels will vary according to the amount of resources dedicated to training for each mission, and the efficiency of the training process.

COAST GUARD RESERVE

Individual Training Level

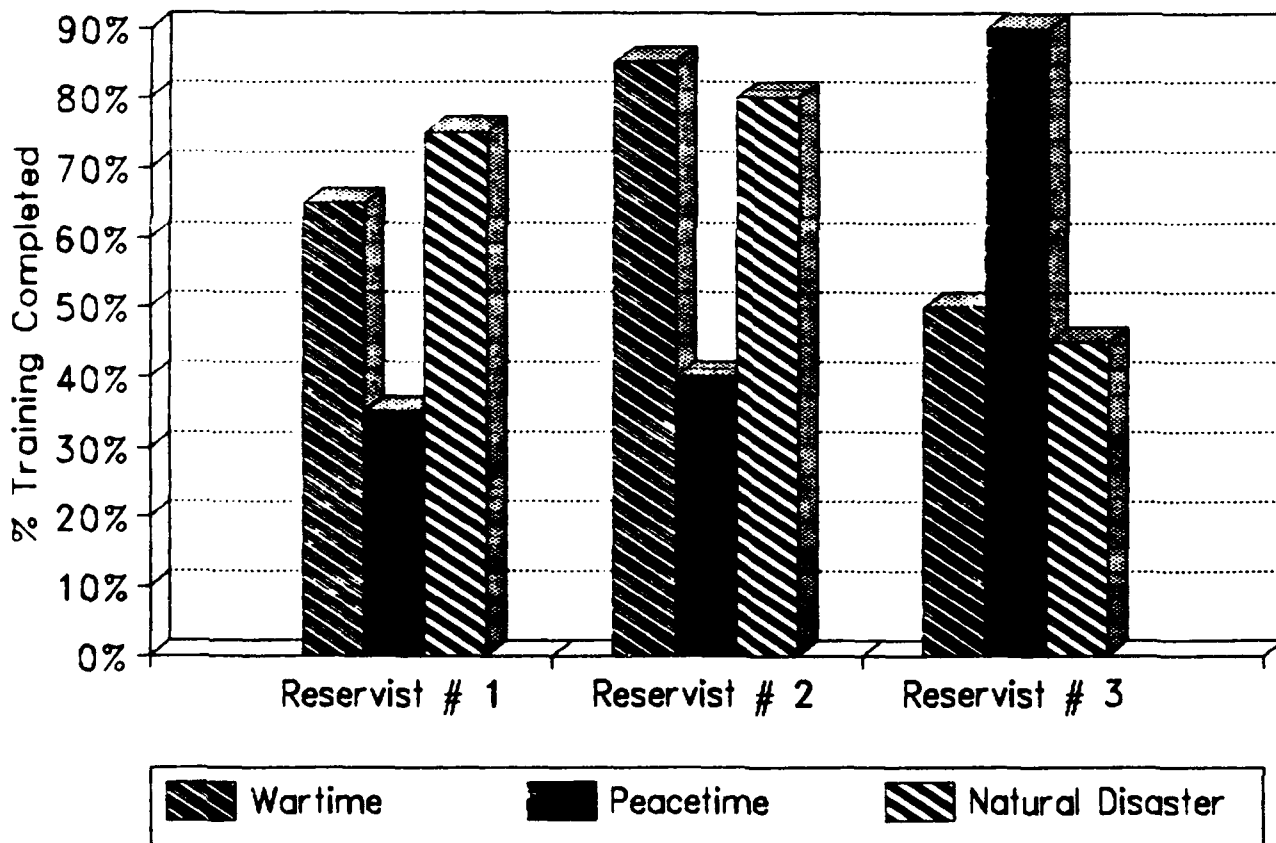


Figure 7

By quantifying output, analysis can show the relationship between inputs (budget dollars) and outputs (training level/force size). This quantification empowers the budget as a control mechanism for management. Without this input-output linkage, the budget is merely a plan to consume assets. Moreover, by functioning in this manner, the budget can compare the efficiency of different alternatives and assist leaders in selecting the best combination of resources for a particular set of goals.

E. THE BUDGET AS A CONTROL SYSTEM

The previous discussion emphasized the need to express output in terms of assets and expenses, and expressed in a "present value" context. The output assets were then translated into a skills model. These conceptualizations enable the budget to be used as a simple control system. As such, the control system can improve the consistency and feasibility of the strategy option selected.

Control systems depend on sensors, selectors, and effectors, all linked by communication (p. 10). The budget control system starts with the current asset base, the trained reservists from previous years. The output model serves as the sensor, revealing the exact training levels of the Reserve force.

The strategist can then target specific desired outputs for the current year, this decision functions as the

selector mechanism. It links with the budget to designate resources for production of those outputs. The supply of financial resources provides the means to implement the goals; this becomes the effector. This budget control system would eliminate problems of consistency and feasibility.

The selector in strategy extends beyond control and directly relates to the strategic thrust of the organization. Ansoff's model (from p. 16), divides strategic thrusts into continuity and discontinuity modes. Continuity thrusts are appropriate when the environment is stable, and the organization is achieving its goals. Discontinuity thrusts are needed to respond to a changing environment and when organizational goals are not being achieved.

The Coast Guard Reserve could use Porter's model to conceptualize conditions within government. Placing the organizational goals in this context would indicate which thrusts, continuity or discontinuity, are required.

Control systems still may suffer from "moral hazard." And, the comprehensive strategy still needs to develop consonance and advantage, activities which are difficult for the budget to express. But, the expression of organizational activities as outputs accomplishes two purposes. First, it is needed to empower the budget as a control mechanism. Second, it may help the Reserve compete for resources from Congress, if Congress insists on more

quantification of an organization's accomplishments. In this sense, the control mechanism is consonant with the environment surrounding competition for funding.

The main advantage that a government agency exploits is the legal barrier to entry faced by potential providers of the same service. As existing agencies seek to expand into complementary areas, cost efficiency may erect a further barrier to entry. The budget could assist an organization in becoming the most efficient producer of a required service. With output defined, the budget can allow comparison of different input levels to select the most efficient option.

Changing the budget to conform to the ideas presented in this chapter will help to solve some of the previous problems. The budget, as an improved control system provides the means to analyze alternatives, select the most efficient one, and control implementation.

F. CHAPTER CONCLUSION

This chapter explored the use of the budget to solve some of the problems in the existing Coast Guard Reserve strategy. The concepts of assets and expenses focus on the difference between future and current consumption. Training increases reservists' future potential; this option increases assets. Performance of a mission by a reservist

provides a current service; this option consumes assets, by definition an expense.

In this framework, managers can shift resources between future benefits and current consumption as dictated by the needs of the situation. With output definition and a skills model, the Coast Guard Reserve could clarify the exact outputs desired from consumption of its financial resources. This enables the budget to function as a control system, eliminating consistency and feasibility problems. Associating resource consumption with the goals of the organization, will solve some of the problems listed in Chapter IV.

The control system based on the budget may also assist consonance if Congress insists on more quantification of an organization's output. Cost efficiency from the budget could provide an additional advantage, erecting a barrier to potential providers of the same service. The strategist needs to examine the environment and select a strategic thrust or direction. Following selection, control systems, including the budget, guide the organization towards its objectives.

Thus, there are many benefits to altering the budget as advocated in this chapter. And, these alterations will assist the organization in its practice of strategy.

VI. EPILOGUE

A. CONCLUSION

Every organization faces decisions on ends and means. Strategy attempts to address them simultaneously, to ensure that the answers are properly related to each other. The answers then are not unique. There are many ways to relate means and ends; other methods could deliver a similarly appropriate answer. The hope is that strategy can more easily exclude improper answers. That is, by asking the appropriate questions, strategy can deliver the appropriate answers in a more accurate and timely manner. The focus then is method in relation to results.

The Coast Guard Reserve lacks an integrated strategy. Using a business model of strategy showed one possible method for formulating and implementing strategy. This method enjoys the advantage of building around a budget, so the Coast Guard Reserve could expand its existing budget system to more fully practice strategy.

To adequately serve this purpose, the budget needs adaptation to correct some flaws. In particular, the Reserve needs to define output and coordinate goals, resources and controls towards the desired output. The Coast Guard is facing multiple decisions: Which method to use? Which goals to set? How to control their implementation?

Simplifying these decisions, by placing them in a relational context is one benefit from a strategic planning process.

The Commandant in his long range view, stated that

Budgetary constraints will require the Coast Guard to meet its needs through improved productivity....We will make full use of the Reserve in augmenting all mission areas as necessary. (Coast Guard, October, 1989, p. 3)

The Coast Guard and the Reserve may need to jointly develop a strategic planning process, to ensure that the Reserve's role in the parent organization is appropriate. No thesis could hope to encompass all of these issues. A collection of the best talent available should examine the process and the issues to ensure inclusion of all relevant data.

So the thesis ends as it began, dealing with current decisions and the future. The primary decision concerns selection of the method to make these decisions. The quality of present decisions on these issues will affect the organization into the next century. The method to formulate the issues and select the answers, should be appropriate to the impact that the answers will create.

B. FINDINGS

This thesis examined strategy using the budget. The primary research question asked: how does the Coast Guard Reserve implement strategy in its budget ? To approach this central issue, the thesis first asked: what is the definition of strategy ? Strategy was viewed as a system

for making critical decisions on purpose and the future, in response to competitive conditions. The process includes a formulation and implementation stage, exploiting some comparative advantage to dominate an opponent.

The practice of strategy addresses the following questions:

- What are the organization's goals ? (Goals)
- What is the environment ? (Environment)
- What are the alternatives ? (Alternatives)
- What are the consequences of alternatives ? (Futurity)
- What is our comparative advantage ? (Advantage)
- How can we best exploit the situation ? (Niche)
- How should we structure ? (Organization)
- How will we control implementation ? (Control)
- How will we evaluate the success of the strategy and the need for adaptation ? (Evaluation)

The budget serves as a control mechanism, estimating and measuring a goal by its cost. The strategist obtains and transforms resources into some organizational output. The budget provides a gauge, relating cost, progress towards goals, and survival. The strategy can be evaluated on the basis of consonance, consistency, feasibility, and advantage.

Next, the thesis asked: what was the past strategy of the Coast Guard Reserve ? Inference of recent strategy revealed an organization seeking growth but facing increasing competition for resources, especially funding and manpower. The Coast Guard Reserve emphasized military missions and educational benefits respectively, to attract

the needed resources. The budget and other control reports focused on full consumption of resources.

Following this, the thesis asked: how effective was that strategy ? Analysis of recent strategy showed varying degrees of success depending on the perspective and criterion of the evaluator. From a theoretical view, better consistency and feasibility would improve the organization's output. Accomplishment of goals was not controlled by linking resources to the level of attainment desired.

Finally, the thesis asked: how can the strategy be improved ? By quantifying output, the budget can compare various alternatives. The budget described the organization's activities in terms of assets and expenses. However, a definition of output is needed to empower the budget as a control system. Together, the output definition and the budget could solve the consistency and feasibility problems, by linking resource consumption with the organization's goals.

C. RECOMMENDATIONS

The American culture of democracy and capitalism calls for rational stewardship in the public domain. Ansoff observed the increasing competition for resources and commented:

The explosive growth of expenditures for government and social welfare has reached a level at which inefficiency can no longer be tolerated. As a result, the not-for-profits are under growing pressure to emulate the

efficiency of the business firm. (Ansoff,1979,p. 30)

To survive in such an environment, the Coast Guard Reserve, must demonstrate high expertise in managing its resources, and a strategic process is part of that management.

I recommend that the Coast Guard Reserve adopt a formal, but not static, process of strategic management, which can serve to ensure the vitality of the organization. The strategic process should identify long term goals for the organization and methods to achieve these goals. To be effective the Reserve's strategy must be integrated with the strategy of the active duty Coast Guard. To be realistic, the strategy will be constrained by the amount of resources available in the Federal Government arena.

No specific model is recommended for the strategic management function. However, this thesis identified many of the critical issues. Any method used should capably address the relevant issues as shown in this thesis.

APPENDIX A

Coast Guard Missions and Competitors

Mission	Competitor
- Aids to Navigation	Aids maintained by private firms or civilians under pilot program with contract administered by Coast Guard
- Boating Safety	Various state and local government agencies
- Defense Operations	Navy
- Environmental Response	Federal Environmental Protection Agency, various state and local government agencies
- Ice Operation	None
- Maritime Law Enforcement	Federal Drug Enforcement Administration, U.S. Customs Service, various state and local government agencies
- Marine Inspection	American Bureau of Shipping
- Port Safety/Security	Various state and local government agencies
- Search and Rescue	Department of Defense various state and local government agencies
- Waterways Management	Army Corps of Engineers various state and local government agencies

APPENDIX B

Data used to construct Figure 6

(all figures in thousand dollars)

<u>Year</u>	<u>Nominal Budget</u>	<u>Adjusted Budget</u>	<u>% OF 1980</u>
COAST GUARD RESERVE			
1980	42675	66710	100
1981	49483	67470	101.14
1982	51483	65575	98.30
1983	54000	65990	98.92
1984	55355	65123	97.62
1985	59223	67352	100.96
1986	58857	65028	97.48
1987	64400	69002	103.43
1988	62884	62884	94.26
COAST GUARD ACTIVE			
1980	1115209	1743331	100
1981	1336972	1822979	104.57
1982	1482456	1888238	108.31
1983	1603798	1959914	112.42
1984	1690542	1988872	114.08
1985	1798908	2045841	117.35
1986	1617939	1787580	102.54
1987	1802275	1931077	110.77
1988	1782506	1782506	102.25
NAVY RESERVE			
1980	268054	419030	100
1981	318578	434385	103.66
1982	374600	477136	113.87
1983	678435	829066	197.85
1984	767100	902470	215.37
1985	1127012	1281715	305.88
1986	1264599	1397192	333.43
1987	1394892	1494580	356.68
1988	1512963	1512963	361.06
NAVY ACTIVE			
1980	7351152	11491561	100
1981	8920295	12162932	105.84
1982	10324474	13150520	114.44
1983	10846708	13255172	115.35
1984	11445908	13465774	117.18
1985	15701274	17856560	155.39
1986	15875246	17539770	152.63
1987	17625440	18885074	164.34
1988	18237199	18237199	158.70

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